The genus Heteroclitopus Péringuey in Kenya (Coleoptera: Scarabaeidae)

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ABSTRACT. — Two new species of *Heteroclitopus* Péringuey are described from Kenya. A third species is reported from Kenya, and its lectotype is designated. A tentative key to the 12 known species is given.

INTRODUCTION

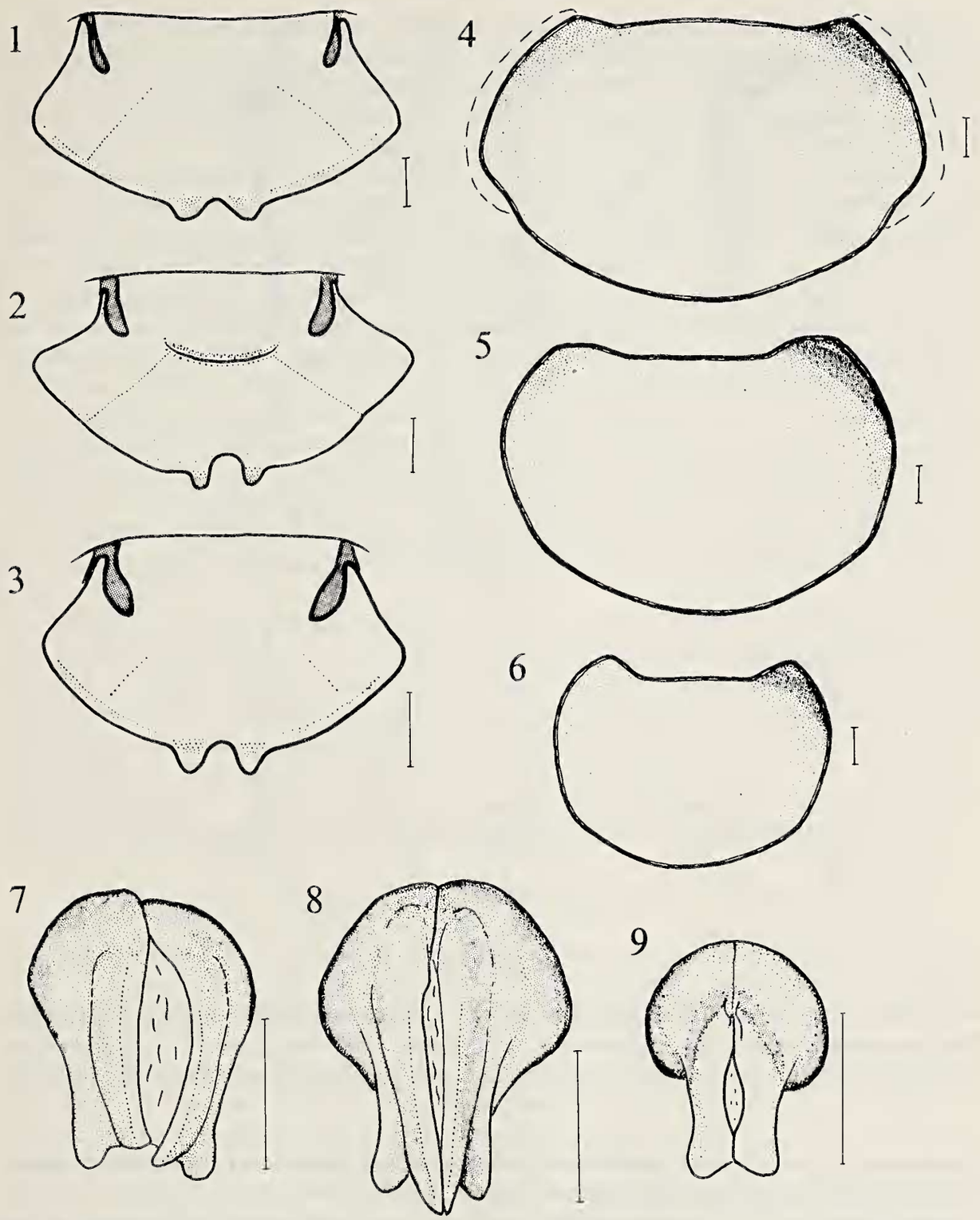
Heteroclitopus Péringuey, 1901, is a rare Afrotropical scarab genus, up till now consisting of 10 described species (Ferreira, 1973). Most of the species are based on very few specimens, and it is therefore surprising that my colleague C. Smeenk brought back from Kenya 11 specimens belonging to three different species. They were all collected in the same place, during the same night, a rainy night swarming with termites. These circumstances may be relevant, because it has been suggested by Péringuey (1901) that *Heteroclitopus* may well be termitophilous, and indeed certain termitophiles swarm with their hosts. Whether termitophilous or not, the peculiar hind tarsi and the reduced labial palpi are indicative of special habits. The collecting locality was Leopard Rock in the Meru National Park, a savanna region at the northeastern foot of Mt. Kenya. Müller (1941, 1942) described some *Heteroclitopus* from Ethiopia and Somalia; other records have been published for Tanzania (see key below). Until now there were, to my knowledge, no records for Kenya. During all my own collecting activities in Kenya I never saw any *Heteroclitopus*. Two of the three species collected by Smeenk are new to science; the other belongs to *H. zavattarii* Müller (1941). The type-material of *H. zavattarii* and its alleged subspecies *jubensis* Müller (1942) is discussed, the two novelties are described, and these three species are inserted in a tentative key to all the species of *Heteroclitopus*. This key is based on types, on other material, on the last complete synopsis by Janssens (1939), and on the well-illustrated descriptions of Ferreira's species (1969). A full-scale revision is beyond the present scope of my work on laparostict scarabs. For further references, see Ferreira's catalogue (1973). It should be noted that the relationships between *Heteroclitopus* and some more closely related genera (*Stiptopodius* Harold, *Pinacotarsus* Harold) need a critical re-evaluation, especially with respect to the characters of the hind tarsi.

THE KENYAN SPECIES

Heteroclitopus smeenki sp. nov. (figs. 1, 4, 7, 10, 13)

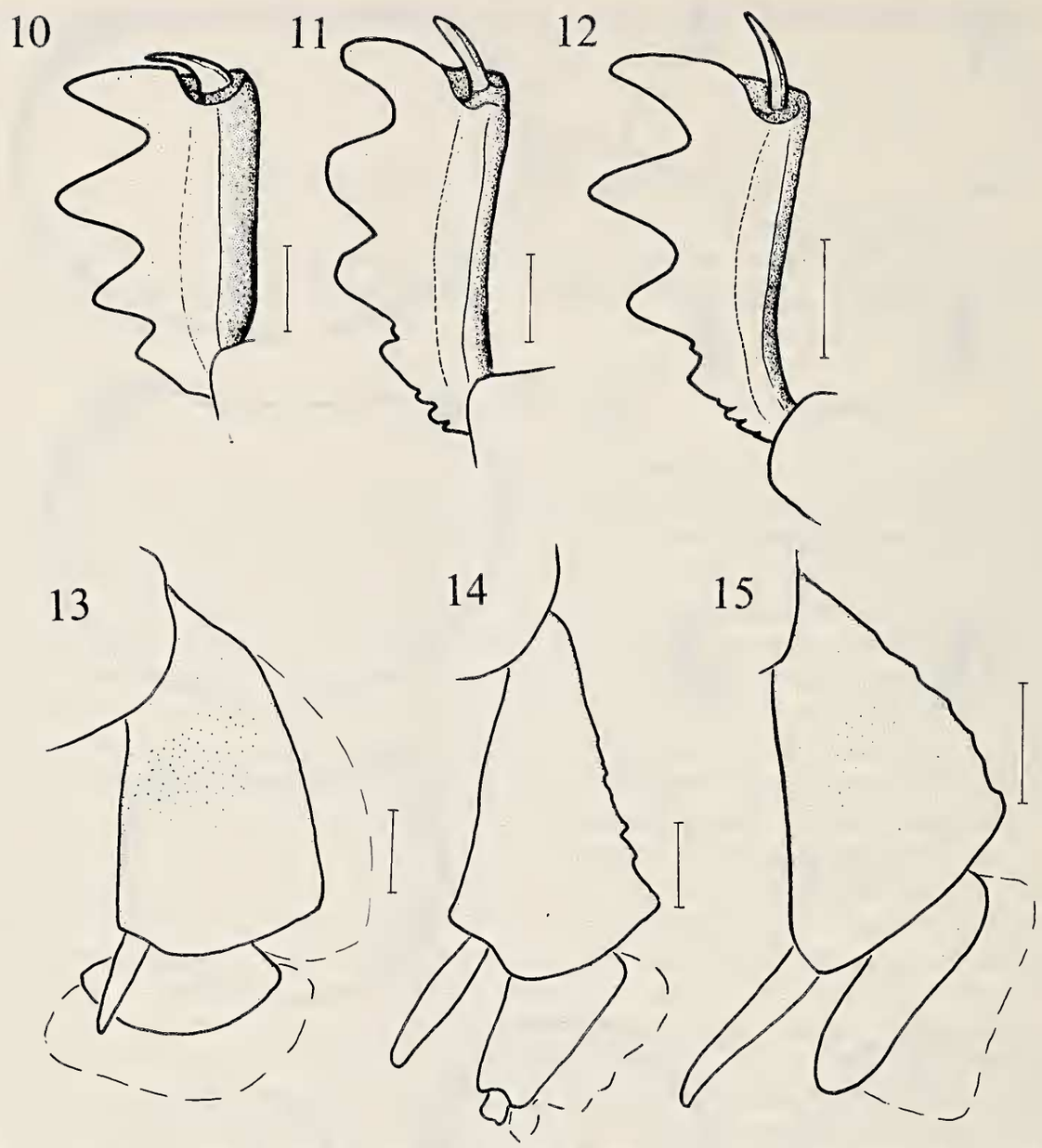
Holotype (male). — Approximate length 10.5 mm. Black, largely shiny. Pilosity reddish-brown. Cephalic contours, fig. 1. Clypeal denticles and remainder of anterior margin strongly reflexed; clypeal and genal surfaces crowdedly punctate, medially almost scabrous; many punctures with long, fine, erect seta; remainder of head abundantly minutely punctate; no indication of clypeofrontal elevation. Eyes with ca. 7 facet rows across their widest point. Pronotal contours, fig. 4; pronotal suface evenly convex, basally with slightly impressed midline; pronotal base feebly marginate; posterior section of lateral border strongly sinuate; almost entire pronotum with dense, very distinct, braided striolation, toward base passing into dense punctation; pronotal apex, slightly behind border, with narrow fringe of suberect, long setae over a strip as wide as head. Elytral striae well-defined, narrow, minutely punctate (× 50), punctures separated by many times their diameter; interstriae distinctly convex, subopaque due to microreticulation (× 50), with irregular punctation, the sparse larger punctures with erect seta.

Antenna brown, club light-brown. Lateral surface of propectus with posteriorly progressive-



Figs. 1-9. *Heteroclitopus* from Meru NP, Kenya. Contours of: 1-3, head; 4-6, pronotum; 7-9, parameres. — 1, 4, 7, *H. smeenki*, holotype; 2, 5, 8, *H. meruensis*, holotype; 3, 6, 9, *H. zavattarii*. — Dashed line (fig. 4), outer limits of dense pilosity. Scale lines are 0.5 mm.

ly dense cover of long setae (trichome?); postprosternum distinctly carinate. Anterior lobe of metasternum densely punctate-setose, punctures of posterior parts finer, setae shorter, lateral wings almost glabrous, impunctate. Abdominal sternites glabrous, with vague, fine, scattered punctation; derm opaque, shagreened. Pygidium minutely punctate (× 50), opaque; anal margin thickened. Fore tibia, fig. 10. Middle and hind tibiae (fig. 13) strongly complanate-dilated. Hind tarsus (fig. 13) consisting of a single strongly dilated segment, with double fringe of densely set long setae (trichome?) along distal margin. Underside of fore femur finely, densely



Figs. 10-15. *Heteroclitopus* from Meru NP, Kenya. Contours of: 10-12, underside of fore tibia; 13-15, underside of hind tibia and tarsus. — 10, 13, *H. smeenki*, holotype; 11, 14, *H. meruensis*, holotype; 12, 15, *H. zavattarii*. — Dashed line, outer limits of dense pilosity. Scale lines are 0.5 mm.

punctate-setose; underside of middle and hind femora and tibiae minutely, densely punctate, long setae largely confined to external sides. Phallus, fig. 7.

Identification. — *Heteroclitopus smeenki* is a large species with a peculiar transverse striolation on the pronotal disc; other *Heteroclitopus* have a punctate or ocellate-punctate pronotum. Other characteristic features are the fringe of erect setae behind the anterior pronotal border, the shape of the hind tibiae and their first (and only) tarsal segments, and the details of the hind tibial and tarsal pilosity.

Material examined. — Holotype only, from Kenya: Meru National Park: Leopard Rock, 11-XI-1979, C. Smeenk, at light, deciduous low orthophyll savanna (Leiden museum).

Heteroclitopus meruensis sp. nov. (figs. 2, 5, 8, 11, 14)

Holotype (male). — Approximate length 10 mm. Black, shiny. Pilosity reddish-brown. Cephalic contours, fig. 2. Clypeal denticles and remainder of anterior margin feebly reflexed; entire cephalic surface distinctly, simply punctate, punctures with indistinct stubbles and some se-

tae; clypeofrontal elevation distinct, feebly arcuate. Eyes with ca. 7 facet rows across their widest point. Pronotal contours, fig. 5; pronotal surface evenly convex; basally with slightly impressed midline; pronotal base feebly marginate; posterior section of lateral border moderately sinuate; entire pronotum with dense, very distinct, evenly distributed punctation; punctures isodiametric, 12 ± 2/0.25 sq. mm, their diameters 0.08-0.11 mm (both measured on pronotal centre); most punctures with erect setae, their length scarcely exceeding punctural diameter. Elytral striae well-defined, rather wide (ca. 0.15 of interstrial width), with geminate punctures separated by 4-7 times their diameter; interstriae distinctly convex, with abundant, scattered, double punctation, the larger juxtastrial punctures with erect seta.

Antenna brown, club light-brown. Lateral surface of propectus evenly, densely, coarsely punctate-setose. Anterior lobe of metasternum densely punctate-setose; posterior part of metasternal disc finely, abundantly punctate, glabrous; metasternal wings densely punctate-setose, lateral punctures subannulate. Lateral surface of abdominal sternites distinctly punctate-setose, setae long, semierect; derm shiny. Pygidium glabrous, densely covered with very distinct, isodiametric punctures, their diameters ca. 0.1 mm, densities 34 ± 2 sq. mm; anal margin thickened. Fore tibia, fig. 11. Middle and hind tibiae (fig. 14) complanate-dilated, their undersides very finely punctate. Hind tarsi with 2 segments left (fig. 14), segment 1 externally densely setose (trichome?). Underside of fore and middle femora with distinct double punctation and sparse longer setae; underside of hind femur glabrous, with fine punctation only. Phallus, fig. 8.

Identification. — *Heteroclitopus meruensis* has a distinct, very evenly distributed, simple pronotal punctation. There is a single distinct, feebly arcuate, clypeofrontal ridge. The first tarsal segment is elongated, while the second segment is present. In the two other species recorded here there is not even an articulation point on the apex of the first hind tarsal segment, so that those species seem really to have one-segmented hind tarsi; like *meruensis*, other species (e.g. *boucomonti*) must in the intact state have more than one hind tarsal segment.

Material examined. — Holotype only, from Kenya: Meru National Park: Leopard Rock, 11-XI-1979, C. Smeenk, at light, deciduous low orthophyll savanna (Leiden museum).

Heteroclitopus zavattarii Müller (figs. 3, 6, 9, 12, 15)

Material examined. — 12 specimens. Lectotype ♂ of *H. zavattarii*, here designated, labelled "Miss. E. Zavattarii/nei Borana A.O.I./Nogezeli/III. 1937", length 8 mm. (Trieste museum); paralectotype cf. ♀ in same museum, labelled "El Banno/1.5.1939", "Miss. E. Zavattari/Sagan-Omo A.O.I.", length 8 mm. Holotype ♂ of *H. zavattarii* subsp. *jubensis* Müller, labelled "Somalia It./Bidi-Scionde/Basso Giuba/Patrizi 1923", length 7.5 mm (Genoa museum). Furthermore 9 ♂♀ specimens from Kenya: Meru National Park: Leopard Rock, 11-XI-1979, C. Smeenk, at light, deciduous low orthophyll savanna (Leiden museum).

Notes. — A comparison of the specimens mentioned above left very little ground for maintaining *H. zavattarii* subsp. *jubensis* Müller, 1942; the differences with the nominate form are minimal, and pertain to the pilosity only. Therefore *jubensis* is here considered a mere junior synonym of *zavattarii*.

KEY TO THE SPECIES OF *HETEROCLITOPUS*

1. Elytral interstriae more or less convex, or even costiform 2
— Elytral interstriae flat 9
2. Elytra distinctly, densely setose 3
— Elytra glabrous or indistinctly setose 6
3. Interstriae with seriate punctures on either side, medially smooth 4
— Interstriae medially also punctate 5
4. Tarsal segment 1 of hind legs narrow, elongate, length/width ratio ca. 2. — Zaire ..... *burgeoni* Boucomont, 1926

— Tarsal segment 1 of hind legs about as broad as tibia, length/width ratio 1. — Natal, Zimbabwe ..... *remipes* Peringuey, 1901

5. Pronotum with very large ocellate punctures (less than 20 such punctures over midline). Hind tarsal segment 1 with length/width ratio ca. 2. — Tanzania ..... *herteli* Ferreira, 1969

— Pronotum with small ocellate punctures (more than 20 such punctures over midline). Hind tarsal segment 1 with length/width ratio ca. 3. — Ethiopia, Somalia, Kenya ..... *zavattarii* Müller, 1941 (= *jubensis* Müller, 1942)

6. Pronotum with dense, simple, rather fine punctation. — Kenya ..... *meruensis* sp. nov.

— Pronotum with dense, double punctation (= two size-classes mixed). — Ivory Coast, Liberia ..... *boucomonti* Paulian, 1949

— Pronotum largely with fine, more or less transverse striolation. — Kenya .. *smeenki* sp. nov.

— Pronotum with very large ocellate punctures 7

7. Elytral striae much narrower than interstriae. — Guinea ..... *freyi* Ferreira, 1969

— Elytral striae almost as wide as costiform interstriae 8

8. Larger, ca. 8 mm long. Clypeal and vertigial punctation coarse, on clypeus more or less confluent. — Tanzania ..... *foveatus* Boucomont, 1923

— Smaller, ca. 5 mm long. Head uniformly finely punctate, punctures not confluent. — Zaire ..... *collarti* Janssens, 1939

9. Elytra distinctly setose. Pronotal base immarginate. Hind tarsal segment 1 very broad, fan-shaped. — Zambesi ..... *gilleti* Boucomont, 1923

— Elytra glabrous. Pronotum marginate along all sides. Hind tarsal segment 1 trapeziform. — Zaire ..... *punctulatus* Boucomont, 1928

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